

What is claimed is:

1. An apparatus comprising:

a receiver member for holding a part of an elongated member, said receiver member having a channel therethrough, at least one aperture for a closure member, and an opening transverse to said channel;

a grommet member for holding a part of a bone implant member, said grommet member having a passage therethrough and an extension transverse to said passage,

wherein said extension is inserted through said transverse opening of said receiver member so that said grommet member is rotatably connected to said receiver member.
2. The apparatus of claim 1, wherein said extension is compressible.
3. The apparatus of claim 2, wherein said extension includes at least one prong.
4. The apparatus of claim 3, wherein said extension includes at least two prongs, and further including a block positioned between said prongs.
5. The apparatus of claim 4, wherein said block comprises one of a clip, a ball, a cylinder, and a planar solid.
6. The apparatus of claim 3, wherein said at least one prong includes a flange for interacting with a portion of said receiver member to retain said extension with said receiver member.

7. The apparatus of claim 1, wherein said bone implant member includes a shank, said shank being held within said passage of said grommet member.

8. The apparatus of claim 7, wherein said bone implant member is one of a bone screw, a bone bolt, a bone hook, a clamp, or a connector.

9. The apparatus of claim 1, wherein said extension has a groove formed therein.

10. The apparatus of claim 9, further comprising a retaining ring, wherein at least a portion of said retaining ring fits within at least a portion of said groove of said extension.

11. The apparatus of claim 10, wherein said receiver member includes an extension portion having a gap, and wherein said extension of said grommet member is inserted through said gap.

12. The apparatus of claim 10, wherein said receiver member includes an internal groove, and at least a portion of said retaining ring fits within at least a portion of said groove of said receiver member.

13. The apparatus of claim 9, further comprising at least one retaining pin, wherein at least a portion of said retaining pin fits within at least a portion of said groove.

14. The apparatus of claim 13, wherein said receiver member includes at least one hole for said at least one retaining pin.

15. The apparatus of claim 1, wherein said receiver member includes an internal countersunk portion defining a ledge.

16. The apparatus of claim 15, wherein said ledge is integral with said receiver member.

17. The apparatus of claim 15, further comprising an insert connected to said receiver member, said ledge being integral with said insert.

18. The apparatus of claim 1, further comprising at least one intermediate member between said receiver member and said grommet member.

19. The apparatus of claim 18, further comprising silicone applied between said intermediate member and said receiver member to substantially maintain said intermediate member and said receiver member in a desired relative position.

20. The apparatus of claim 18, wherein said grommet member includes at least one protrusion adapted to block movement of said intermediate member with respect to said grommet member in at least one direction.

21. The apparatus of claim 18, wherein said intermediate member is substantially in the shape of a disk.

22. The apparatus of claim 18, wherein said intermediate member includes a groove.

23. The apparatus of claim 18, wherein said intermediate member includes a roughened side.

24. The apparatus of claim 23, wherein said roughened side includes a set of one or more splines.

25. The apparatus of claim 1, further comprising an elongated member extending through said channel of said receiver member.

26. An apparatus comprising:

a receiver member for holding a part of an elongated member, said receiver member having a channel therethrough, at least one aperture for a closure member, and an opening transverse to said channel having a countersunk edge;

a grommet member for holding a part of a bone attachment member, said grommet member having a passage therethrough and at least two prongs extending transverse to said passage, said prongs being inserted into said transverse opening so that a portion of each of said prongs is adjacent said countersunk portion, whereby said grommet member and said receiver member are rotatably connected; and

at least one fixing member lodged between two of said prongs when said prongs are within said transverse opening.

27. The apparatus of claim 26, further comprising a first disk connected to one of said receiver member and said grommet member.

28. The apparatus of claim 27, further comprising a second disk connected to the other of said receiver member and said grommet member.

29. The apparatus of claim 28 wherein said first disk has a splined surface facing said second disc, and said second disc has a splined surface facing said first disk.

30. The apparatus of claim 29, further comprising an orthopedic rod extending through said channel of said receiver member.

31. The apparatus of claim 30, further comprising at least one locking member connected to said receiver member for locking said rod within said channel.

32. The apparatus of claim 31, wherein said at least one locking member is a set screw.

33. The apparatus of claim 32, comprising two locking members connected to said receiver member for locking said rod within said channel.

34. An apparatus, comprising:

a receiver member having a body portion with a channel for accommodating a part of an elongated member and at least one opening for a locking member, and an extension portion extending from said body portion substantially transversely to said channel, said extension portion having a hole therethrough communicating with said channel;

a generally U-shaped grommet member having at least two prongs and a passage for accommodating a part of a bone fixation member, said prongs being inserted into said hole through said extension portion so that said grommet member is rotatably connected with said receiver member;

a fixing member lodged between at least two of said prongs, whereby said grommet member is prevented from being removed from said receiver member;

a first disk connected to said extension portion of said receiver member, said first disk having a first surface with a groove for contacting said elongated member, and a second surface having radial splines;

a second disk connected to said grommet member, said second disk having a first surface with a groove for contacting said bone fixation member and a second surface having radial splines;

wherein said second surfaces of said first and second disks face each other.

35. The apparatus of claim 34, further comprising an elongated member within said channel of said receiving member, a bone fixation member within said passage of said grommet member, and a locking member in said aperture of said receiver member, wherein said locking

member presses against said elongated member against said first disk to lock said elongated member, first disk, second disk and bone fixation member with respect to each other.

36. An apparatus, comprising:

a receiver member having a body portion with a channel for accommodating a part of an elongated member and at least one opening for a locking member, and an extension portion extending from said body portion substantially transversely to said channel, said extension portion having a hole therethrough communicating with said channel;

a generally U-shaped grommet member having at least two prongs and a passage for accommodating a part of a bone fixation member, said prongs being inserted into said hole through said extension portion so that said grommet member is rotatably connected with said receiver member;

a fixing member lodged between at least two of said prongs, whereby said grommet member is prevented from being removed from said receiver member;

a first disk connected to said extension portion of said receiver member, said first disk having a first surface and a second surface, said first surface having at least one opening for accommodating at least a part of said body portion so that said receiver member and said first disk are substantially not rotatable with respect to each other when said first disk is connected to said extension portion; and

a second disk connected to said grommet member,
wherein said first and second disks face each other.

37. The apparatus of claim 36, wherein said second surface of said first disk is roughened, and wherein said second disk has a surface that is roughened, and said roughened surfaces of said disks face each other.

38. The apparatus of claim 37, wherein said roughened sides included a set of splines.

39. A kit, comprising:

a sealed, sterile interior, said interior including a set of at least one receiver member of a predetermined size for holding a part of an elongated member, said receiver member having a channel therethrough, at least one aperture for a closure member, and an opening transverse to said channel; and

a set of at least one grommet member of a predetermined size for holding a part of a bone implant member, said grommet member having a passage therethrough and an extension transverse to said passage,

wherein said extension is inserted through said transverse opening of said receiver member so that said grommet member is rotatably connected to said receiver member.

40. The kit of claim 39, further comprising:

a second set of at least one receiver member of a second predetermined size, and a second set of at least one grommet member of a second predetermined size.

41. The kit of claim 40, wherein said predetermined sizes are adapted for implantation in one or more of the set of spinal regions consisting of cervical, thoracic, lumbar and sacral.

41. The kit of claim 39, further comprising at least one instrument for implanting orthopedic bone implants.

42. The kit of claim 39, further comprising at least one additional bone implant.

43. The kit of claim 42, wherein said at least one additional bone implant is from the set consisting of intervertebral cages, intervertebral spacers, orthopedic rod connectors, bone plates, and bone-growth promoting substances.